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ABSTRACT

This collection of abstracts is part of a continuing series providing information on recent doctoral dissertations. The 14 titles deal with the following topics: children's ability to read their own dictated oral language; adjunct structure and reading comprehension; learning and comprehension of simultaneously presented stimuli in children of superior intelligence; literal comprehension as an aspect of total comprehension; the effects of advance and nonorganizers in the learning of verbal materials; the effect of silent and oral reading on comprehension and oral reading miscues; effects of learning instructions and age on information acquired from prose; adult age differences in sentence memory; the effects of restructuring grammatical patterns on comprehension; the effects of expectation modification on reading comprehension; the effects of spatial organization of text on content recall; relationships between semantic and stylistic aspects of language and comprehension of discourse written for children; influences upon learning rate in first grade children exposed to several stressors; and the effects of lexically ambiguous nouns embedded in a reading task for children. (GW)

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LEARNING AND COMPREHENSION OF SIMULTANEOUSLY PRESENTED STIMULI IN CHILDREN OF NORMAL AND [illegible]PERIOR INTELLIGENCE

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A STUDY OF SPECIFIC ASPECTS OF ORIGINAL TAPED STORIES WITH SELECTED ELEMENTARY CHILDREN

BEIGHLEY, Ruth Virginia, Ed.D.
Arizona State University, 1977

Educators have recognized the historical importance of oral language and its interrelationship with and significance to the reading process and the teaching of reading. Little research has been done, however, pertaining to this interrelationship. The purpose of this investigation was to study (1) the oral reading ability of first and fourth graders reading samples of their own dictated oral language (which had been transcribed from cassette tape) as compared with samples from basal readers that were currently being used, and (2) the readability levels of the same first and fourth graders' own dictated stories as compared with the readability levels of the basal readers currently being used.

Five hypotheses were formulated: (1) there would be no significant difference between the percentage of accuracy in a child's reading his own story and that of commercially published materials; (2) there would be no significant difference between the percentage of accuracy in a child's reading a peer story and his reading from a basal reader; (3) there would be no direct relationship between the readability level of children's transcribed materials and the readability level of commercially published materials for each grade level; (4) there would be no direct relationship in the readability scores for the Spache Readability Test and the Fry Formula on the first grade level materials; and (5) there would be no direct relationship between the readability scores for the Dale Schall Readability Test and the Fry Formula on the fourth grade level materials. Each pupil was recorded reading a portion of his or her story and a selection from the basal reader on cassette tape. Children from a control group were recorded reading the same portion from a peer's original story and a portion from a basal reader. Using the Spache Diagnostic Scale as a guideline, the investigator listened to and graded each story as to percentage of accuracy. The Fisher t test was applied to the scores to determine their significance.

Using the Fry and the Spache Readability Formulas in the first grade and the Fry and Dale-Chall Readability Formulas in the fourth grade, the investigator determined the readability level of the dictated stories and of the basal reader selections. The Pearson Product Moment Coefficient Correlation was then applied to the data.

The following findings and conclusions were drawn from the hypotheses tested in this study. Because there was no significant difference in the first grade experimental group between the oral reading of the child's dictated story and the basal reader, null hypothesis one was not rejected on the first grade level. There was a significant difference in the fourth grade experimental group in favor of the oral reading of the students' dictated stories and, therefore, null hypothesis one was rejected on the fourth grade level. There was a significant difference (negative) in the first grade peer group in favor of the basal reader selections. Therefore, null hypothesis two was rejected on the first grade level. There was a significant difference in the fourth grade control group in favor of the peer's dictated story and, therefore, null hypothesis two was rejected on the fourth grade level.

There was a small but definite relationship between the readability level of the first grade student dictated stories and the selections from the basal readers using the Fry and Spache formulas. There was little relationship in the fourth grade between the readability level of the students' dictated stories and the basal reader selections using the Fry formula. There was a small but definite relationship in the fourth grade between the readability level of the student dictated stories and the basal reader selections using the Dale-Chall formula. There was a moderate relationship between the Fry and the Spache readability formulas. There was virtually no relationship in the fourth grade between the Fry and Dale-Chall readability formulas.

As a result of these data, it was concluded that the use of children's dictated stories will produce a lower percentage of errors in oral reading at the fourth grade level. A number of other interesting aspects surfaced, such as progression in the growth of creativity, sustained interest on the part of the students, opportunities for the use of these stories to teach reading and reinforce reading skills, and contrast of reading themes. As a result of the findings and observations of the study, recommendations for further studies were given.

Order No. 77-16,802, 194 pages.

ADJUNCT STRUCTURE AND READING COMPREHENSION

CATERINO, Linda Claire, Ph.D.
Arizona State University, 1977

One-hundred and thirty-two seventh-grade students participated in an experiment designed to explore the effects of mathemagenic activities on reading comprehension ability. Learners were directed to read a 990-word prose passage and to answer 60 multiple-choice questions based on the text. Subjects were blocked according to their reading comprehension scores on two standardized reading tests. Both high and low comprehenders were given one of three adjunct devices: a word list of key terms, a glossary of key terms, and an outline to use while reading the experimental text. The criterion test consisted of questions focusing on critical material covered by the adjunct device as well as the text, and incidental information referred to only in the experimental passage. Half of the test questions employed a stem taken verbatim from the text and half were lexical paraphrases.

Essentially, the results indicated that high comprehenders remembered more items correctly than low comprehenders, and that high comprehenders were more stable in both right and wrong response sets. Verbatim items were answered correctly more often than paraphrase questions. Adjunct device significantly interacted with comprehension level and item type, indicating that the glossary device may have been more efficient in improving recall for critical material than either the word list or outline devices. Low comprehenders given the word list performed much better on incidental than on critical test items. The significant adjunct device by item-type by item-form interaction for posttest scores supported the previous finding emphasizing the role of the glossary device in highlighting critical information. A reading times analysis was significant for comprehension level only, with low comprehenders requiring more time to read the experimental material.

These results suggest that the glossary device may be most facilitative for the correct recognition of critical information, and that high comprehenders may be more adept at employing this device. Low comprehenders seem to be more attentive to incidental information than high comprehenders, especially when supplied with only a list of key terms. Suggestions for future research include employing an extensive training program to aid subjects in making efficient use of experimenter-supplied learning devices, as well as investigating subject-generated learning methods.

Order No. 77-17,388, 101 pages.

LEARNING AND COMPREHENSION OF SIMULTANEOUSLY PRESENTED STIMULI IN CHILDREN OF NORMAL AND SUPERIOR INTELLIGENCE

COLEMAN, Natalie Christine, Ph.D.
University of Oregon, 1977

Adviser: Richard J. Rankin

The study was conducted in an attempt to discover whether individuals of superior intelligence are more capable of attending to and comprehending simultaneous visual stimuli than individuals of normal intelligence. More specifically, the relationships of sex, intelligence, and the ability to comprehend simultaneous visual stimuli were investigated. Sex was included as an independent variable in order to control for any possible sex differences.

The subjects were 64 fifth and sixth grade students. The subjects were divided into two ability groups. Those individuals designated as intellectually superior (n=32) had obtained an IQ score of 130 or higher on the Stanford-Binet, or its equivalent, and/or had been admitted into the educationally advanced program for gifted students in their school district. Individuals designated as having normal intelligence (n=32) were established as such by virtue of their achievement test scores.

After selection into ability groups, all subjects were randomly assigned to the comparison and control groups. All subjects in the control group received Condition One. Condition One consisted of a slide presentation of two short stories of differing content. The subjects read the stories one at a time. After presentation of each story, the subjects wrote down the two main points of the story and took a comprehension test designed to reflect general understanding of the story.

All subjects in the comparison group received Condition Two. Condition Two consisted of a slide presentation of the same stories used in Condition One. In Condition Two the stories were presented simultaneously. The subject was presented with a four to five word section from each of the stories on each slide. Total time of exposure and density of material was controlled across the experimental and control conditions. After presentation of the simultaneous stories, the subjects wrote down the two main points of each story and took a comprehension test containing items on both stories.

The subjects' score on the comprehension test served as the measure of the dependent variable. The subjects' responses as to the main points of each story were also evaluated for general comprehension of the stimulus material.

The overall test of significance was a 2 x 2 x 2 factorial analysis of variance. Results of the data analysis revealed a significant interaction effect between intelligence and condition ($F(1, 63) = 5.20$, $p < .03$). There was a significant difference between the two ability groups on both conditions, with a greater difference between the groups favoring the superior subjects on the simultaneous presentation of the stimulus material. There was no significant difference between sex on either condition.

Analysis of the subjects' responses as to the main points of each story revealed a significant difference between the conditions. There was no significant difference in the mean number of correct main ideas between the superior subjects and the normal subjects who read the stories one at a time. However, among the subjects who read the stories simultaneously, the superior subjects were able to supply a significantly larger number of correct main ideas than the normal subjects.

Intellectually superior subjects performed more successfully than normal subjects under both successive and simultaneous presentation of the stories. The hypothesis received support in the direction expected. There appears to be an interaction between intelligence and the ability to attend to and comprehend simultaneous visual stimuli.

Order No. 77-19,337, 86 pages.

WORD LENGTH AS A MEASURE OF INTRAPASSAGE DIFFERENCES IN READING COMPREHENSION

CONDON, Mark William Fleming, Ph.D.
University of Missouri – Kansas City, 1976

This study was an examination of literal comprehension, an aspect of total comprehension. This subskill, while popularly held to be fundamental to reading maturity, is not yet fully understood. The object of the present study was to examine a subskill of the literal comprehension of sentences. The design and measures employed were drawn from the work of Ronald P. Carver, one of few to systematically examine literal comprehension.

An essential aspect of literal comprehension is the assignment of meaning to words encountered in a passage. The purpose of this study was to shed light on this rudamentary process. This general research interest was translated into an examination of some seemingly remote research questions related to this process. One question dealt with the relationships between the ability to assign meanings to words, termed efficiency.

Two hundred seventh graders were given tests in materials from grade three through high school. They were each given three tests of their short word efficiency and three of their long word efficiency. The resulting scores were controlled for the physical differences between the long and short words, and converted to standard length words per minute. This allowed comparisons of these efficiency scores in several levels of materials for readers from a range of achievement levels.

The data reduction showed that the difficulty a reader experienced with materials was related to the difference in his scores on short and long word efficiency tests. From this relationship, which reached a .94 correlation, and from other related findings, three conclusions about literal comprehension were drawn. First, that reading rates for each level of achievement were constant across the difficulty levels of the materials. Secondly, that in relatively easy materials, readers are more efficient in reading long words than short words; and conversely, in relatively difficult materials, readers are more efficient in reading short words than long words. Third, when each group of like-achievers was reading materials which were matched to its competence, the efficiency under both word length conditions was approximately the same.

These results differed sharply from expectancy, and have no obvious explanations. Several alternate hypotheses were subsequently considered. The most plausible explanation, though most challenging to investigate, was the proposition of two distinct language facilities, one for terms which linguists would call function words and common words, and another for content words.

This study while closer to basic research than applied, supports a stronger intimacy of relationship between language facility and (even) literal comprehension, than might have been imagined. This has obvious potential for impact on theory and instruction, though specific implications for extending competency in literal comprehension cannot be deduced from these data.

Order No. 77-16,866, 176 pages.

THE EFFECTS OF ADVANCE AND NONORGANIZERS WITH RESTRICTED AND UNRESTRICTED MODES FOR EIGHTH-GRADE STUDENTS AT THREE COGNITIVE LEVELS OF LEARNING AND RETENTION USING SELECTED MATERIALS IN THE ARTS

EWING, Brian Patrick, Ed.D.
State University of New York at Albany, 1977

This study was an experimental investigation comparing the effects of advance and nonorganizers in the learning and retention of meaningful verbal materials in the Arts for separate knowledge, comprehension, and application scores, and for these scores combined. The effects of restricted and unrestricted modes were also examined. The theoretical base for the study is David P. Ausubel's theory of advance organizers and their application to meaningful verbal learning and retention. Ausubel hypothesizes that such organizers facilitate learning and retention of meaningful verbal materials because they permit students to subsume new materials into their pre-existing cognitive structures rather than to rely on rote memory of materials in an unrelated fashion.

The sample was eighty eighth-grade students selected at random from the population of a small-town middle school. Subjects were placed randomly into four treatment groups: one group was given limited access (restricted mode) to the advance organizer, while another group was given limited access (restricted mode) to the nonorganizer. These groups were then given the actual learning passage. This procedure enabled differences to be determined between effects of advance and nonorganizers in the restricted mode for learning and retention. Ss were permitted to read the appropriate passage (advance or nonorganizer) forty-eight hours before, and immediately before reading a learning passage of approximately 3000 words dealing with "The Art of Movie Making." These two groups did not have access to their respective preliminary passage during the study of the longer learning passage.

A third group was given extended access (unrestricted mode) to the advance organizer passage, while a final group was given extended access (unrestricted mode) to the nonorganizer passage. These groups were then given the actual learning passage. This procedure enabled differences to be determined between effects of advance and nonorganizers in the unrestricted mode for learning and retention. Ss in these latter groups were permitted to read the appropriate passage (advance or nonorganizer) forty-eight hours before, and immediately before reading the learning passage of approximately 3000 words, "The Art of Movie Making." Ss in these unrestricted groups, in addition, were permitted to refer to their respective preliminary passage as often as they wished while studying the 3000-word learning passage.

All groups were given a twenty-four item multiple choice criterion test weighted evenly for knowledge, comprehension, and application-level questions. A retention test was administered two weeks later. Data were analyzed for both learning and retention.

From the results of the study, it was concluded that an advance organizer (as defined in the study) did significantly facilitate learning and retention for the combined knowledge, comprehension, and application scores in the restricted mode. This finding was supported for learning in the unrestricted mode as well, but not for retention. Regarding separate cognitive levels, advance organizers did not facilitate learning significantly but at the application level for retention, advance organizers in the restricted mode were significantly effective. Thus, support was found for Ausubel's theory of meaningful verbal learning and retention.

Related results included the finding that advance organizers were significantly more effective for learning and retention at some cognitive levels among girl subjects; whereas, no significant differences were noted by treatments for boys. Finally, age of subjects was not a significant variable in the study.

Order No. 77-18,748, 216 pages.

A PSYCHOLINGUISTIC ANALYSIS OF THE EFFECT OF SILENT AND ORAL READING ON THE COMPREHENSION AND ORAL READING MISCUES OF AVERAGE FOURTH-GRADE READERS

GLENN, June Carol, Ed.D.
University of Southern California, 1976

Chairman: Professor Charles Brown

Purpose. The purposes of this study were (1) to compare what differences occurred in the quality, number, and types of oral reading miscues when categorized according to selected criteria of the Reading Miscue Inventory among three groups of fourth-grade readers; and (2) to compare the differences among these groups in comprehension as measured by a post reading cloze test.

T_1 read the research selection orally at sight and then completed the post reading cloze test. T_2 read the research selection silently before reading it orally, and then completed the post reading cloze test. T_3 read the research selection silently, completed the post reading cloze test, and then read the research selection orally.

Procedure. Six schools were randomly selected from elementary schools in the Anaheim City School District, Anaheim, California. Thirty-nine average fourth-grade readers were randomly selected and assigned to three treatment groups. All readers spoke English as their first language. Each group contained approximately the same number of boys and girls.

The research selection and the post reading cloze test were administered to each subject of the three groups. All oral readings were audiotaped. Miscues were analyzed according to selected criteria of the Reading Miscue Inventory. The independent variable (treatment groups) was analyzed using a one-way analysis of variance. Significant F ratios were analyzed by the application of Duncan's multiple comparison test.

Selected Findings. T_2 scored significantly higher than T_3 in the categories semantic acceptability yes and strength in grammatical relationships. T_1 and T_3 scored significantly higher than T_2 in the loss of comprehension pattern category. T_2 scored significantly higher than T_1 and T_3 on the post reading cloze test. No significant difference was found among the groups in the type of miscues observed or in the number of miscues committed.

Conclusions. (1) A reader's accuracy in using graphophonic information is not directly related to comprehension as measured by a post reading cloze test. (2) Fourth-grade readers make extensive use of graphophonic, syntactic, and semantic cues. (3) The thesis held by many reading authorities that children tend to comprehend better when reading silently than when reading orally was not supported. (4) Oral reading accuracy is not improved when silent reading precedes oral reading. (5) The number of miscues per hundred words is not improved when silent reading precedes oral reading. (6) No significant difference was found in the number of miscues committed among the three treatment groups. (7) The types of oral reading miscues observed were not significantly different when silent reading preceded oral reading than when the research selection was read orally at sight. (8) Individual readers vary widely in the quality, number, and types of miscues committed and in the post reading cloze test scores recorded.

EFFECTS OF LEARNING INSTRUCTIONS AND AGE ON INFORMATION ACQUIRED FROM PROSE

HARRIS, Wendy Joan, Ph.D.
University of California, Berkeley, 1976

The extent and character of information acquired from prose was assessed as a function of learning instructions and age. Fourth, eighth, and twelfth grade students listened to two 200-word mystery stories under instructions to either simply remember the story information, remember it in a relational manner, or remember it in a verbatim or discrete manner. Information acquired was tested by the primary measure of free recall for each story, and a secondary measure of true false questions for the second story presented. Primary dependent variables in each response mode were constructed for information either directly reproduced from the story or otherwise derived (e.g., inferred, concluded) from story content. It was predicted that while both types of information would increase with age, a larger increase was anticipated for the derived than for the reproduced variety. Also, instructions were expected to affect derived information, but not reproduced, and to vary with age. While relational instructions were to facilitate performance more for younger than for older students, discrete instructions were to impede performance only for the older and not for the younger students. Analyses of variance on the various dependent measures resulted in significant grade effects but no reliable interactions with instructions. Grade interacted with information type only for free recall responses, but in a manner opposite to that predicted.

Order No. 77-15,711, 66 pages.

ADULT AGE DIFFERENCES IN SENTENCE MEMORY: AN INVESTIGATION OF CONSTRUCTIVE MEMORY

HURLBUT, Nancy Lillian, Ph.D.
The University of Wisconsin–Madison, 1977

Supervisor: Associate Professor Erich W. Labouvie

After listening to 24 sentences, elderly subjects (mean age 71.9 years) and young subjects (mean age 21.5 years) were asked to recognize, from a set of 60 sentences, which sentences they had heard before. The set of recognition sentences contained (a) acquisition sentences (Old sentences), (b) semantic abstractions integrated from ideas in more than one acquisition sentence (New sentences), (c) semantically incorrect sentences (Noncase sentences). For both ages, there was a high false recognition of New sentences and a low false recognition of Noncase sentences. Such data indicate that young and elderly adults learn/remember sentences by constructing wholistic ideas from separate semantic units (constructive remembering). There were no age differences on measurements of constructive remembering; however, the young adults better recognized verbatim information (Old sentences). Instructions (comprehension and memorization) also influenced the ages differently. There were no age differences under the comprehension instructions but the young subjects showed better verbatim remembering under the memorization instructions. The results indicate that there are no universal, inevitable decrements in the sentence memory of healthy elderly adults. There are deficits in the elderlys' learning/memory performance but such deficits are task specific (verbatim remembering) or experimentally induced (memorization instructions).

Order No. 77-14,337, 125 pages.

THE EFFECTS UPON COMPREHENSION OF RESTRUCTURING GRAMMATICAL PATTERNS

LONDON, Charlotte I., Ph.D.
The Pennsylvania State University, 1977

Statement of the Problem

The purpose of this study was to determine whether there was a significant difference in comprehension: 1) when comparative reduction structures vs no comparative reduction structures were used in written material, 2) when relative clauses were placed near the beginning of a sentence, at the middle of a sentence, and at the end of a sentence, 3) when verb particles were placed after the verbs with which they were associated or after the noun phrases that followed them when they were placed next to their verbs, and 4) whether there was a significant difference in selectional rules consistently functioning to cue subjects to the choice of appropriate nouns or verbs which had the semantic features of either the noun with which the verb had to agree or the verb with which the noun had to agree.

Procedure

There were four independent variables tested in the study. Three of the variables, comparative reduction, verb particle placement, and selectional rules, had two values each, while the fourth variable, relative clause, had three values. There was therefore a total of nine values.

Nine sets of instruments were developed with each instrument testing one of the nine values. The nine sets of instruments were divided into three test booklets labelled Comprehension Survey Form A, Comprehension Survey Form B, and Comprehension Survey Form C.

The data from the study were collected from ninety subjects enrolled as freshmen at Stockton State College in New Jersey in September, 1975. The subjects were pretested with the Cooperative English Tests, Form 1C, and were assigned by test scores to one of three equivalent groups with thirty subjects being assigned to a group. The three subjects with the highest test scores were assigned to each of the three groups and this procedure was followed down to the subjects with the three lowest scores being assigned to each of the three groups. The test instruments were then administered to the groups. The highest achieving subject in each group was tested with a separate form of the test instruments and the three sets of tests were treated as equivalent and given the label subject #1. This procedure was followed down to the three lowest subjects.

The student t-test for the difference between means was used to test the comparative reduction, verb particle, and selectional rules variables, while the Analysis of Variance was used to test the relative clause variable.

Findings

The findings appeared to indicate that: 1. There was a significant difference ($p < .05$) in reading comprehension when comparative reduction vs no comparative reduction structures were used in written material; reading comprehension was better when comparative reduction was used in written material as opposed to when no comparative reduction was used. 2. There was no significant difference in reading comprehension when relative clauses were placed in one of three positions. 3. There was a significant difference in reading comprehension when verb particles were placed after the verbs with which they were associated as opposed to when they were placed after noun phrases; comprehension was better when verb particles were placed after their verbs as opposed to when they were placed after noun phrases. 4. There was no significant difference in selectional rules cuing subjects to the choice of appropriate nouns as opposed to appropriate verbs in written contexts.

Order No. 77-17,708, 118 pages.

THE EFFECT OF EXPECTATION MODIFICATION ON ACTUAL PERFORMANCE OF A READING COMPREHENSION TASK BY ELEVENTH GRADE STUDENTS

MANDATO, Vincent, Ed.D.
Fordham University, 1977

Mentor: John Poster

This study was concerned with the effect of three conditions of feedback administered to high, middle, and low academic self concept (ASC) 11th graders on expected and actual performance of reading comprehension tasks.

This study sought to investigate whether certain feedback conditions would interact with ASC level in order to significantly change expectancy and subsequent performance.

Findings from previous studies which employed the technique of discrepant feedback as a method for expectation change have been contradictory. This study postulated that the inconsistency of findings may have been due to the failure of previous researchers to incorporate ASC variable controls or to consider the length of time over which such feedback was employed.

Discrepant feedback, in the form of gradually inflated, predicted scores (expectation) over a period of 30 trials, was examined as a specific treatment technique for reading comprehension expected and actual change at three ASC levels. No feedback and correct feedback conditions were similarly examined for comparison purposes.

The sample consisted of 180 males and 180 females enrolled in 11th grade English classes in a large school system compatible to middle class areas within diverse socioeconomic urban school districts.

All subjects were first trichotomized on a word rating list to measure for level of ASC. They were then pretested on form A of the Stanford Diagnostic Reading Test (SDRT-III), matched and assigned to one of three feedback groups within each ASC level. Individualized prediction and scoring (treatment) charts were kept and change scores were analyzed at the end of treatment and after a four week post-post-treatment period.

Hypotheses were stated in the null form independently for males and females at each treatment juncture for expected and actual changes. Eight 3 x 3 analyses of variance, mixed design were performed to determine acceptance or rejection, and significant mean changes were examined by the Tukey procedure.

A major finding of the study was the identification of one group in each mid-range ASC male and female category where significant positive directional changes occurred for both expected and actual performance. Although weakened, such changes lasted to the post-post-treatment period. These subjects were identified as being most susceptible to the positive discrepant feedback. Subjects at the extremes exhibited no change at all at the high ASC level and inconsistent change at the low ASC level.

Other significant findings were as follows: 1. Negative expected and actual changes occurred for low ASC males given correct feedback. 2. Low ASC girls did not change expectation but did increase performance when administered correct or inflated-predicted feedback suggesting a beneficial effect from practice. 3. All subjects overpredicted expectations. This was most notable at the low ASC level and especially true of males. 4. It could not be generalized that expected or actual change in reading comprehension occurred as a result of any feedback condition. Inferences for such change must be limited to mid-range ASC students administered gradually discrepant feedback in a positive direction for 30 trials.

The main conclusions from the findings were: 1. Inconsistency of discrepant feedback research is most likely due to a lack of consideration of the ASC variable. 2. Reading comprehension test feedback as presented in a classroom can have a marked but varied effect on individuals, depending on ASC level. 3. School personnel should consider the ASC variable as part of student evaluations. Order No. 77-14,873, 189 pages.

DESIGN OF TYPOGRAPHICAL FORMAT AND PROSE RECALL

MURRAY, Norman Boyd, Ph.D.
Brigham Young University, 1976

Chairman: Adrian P. VanMondfrans

This study considers the effects of multidimensional spatial organization of text on content recall. Subjects (Ss) were 54 missionaries in an intensive language learning program. In a posttest-only-control group design with three replications 24 experimental Ss, in three groups, memorized verbatim a 1,000-word passage presented in spatially organized experimental materials. Thirty control Ss, in three corresponding groups, memorized the same passage using regular training materials. Results indicate facilitative effects of multidimensional spatial organization of text on content recall.

Order No. 77-13,806, 43 pages.

SOME RELATIONSHIPS BETWEEN SEMANTIC AND STYLISTIC ASPECTS OF LANGUAGE AND COMPREHENSION OF DISCOURSE WRITTEN FOR CHILDREN

RICHMOND, James Emery, Ph.D.
University of California, Berkeley, 1976

For many years professional educators and researchers in related fields have been seeking better ways to control the difficulty of reading material designed for children and adults. Most of the research efforts to date have focused primarily on the frequency of occurrence of specific vocabulary, sentence length as a measure of complexity, and the number of syllables per hundred words. However, a limited number of recent investigations have begun to explore additional language variables that may ultimately aid in the development of better means to predict and control reading difficulty.

Two exploratory studies, completed prior to the current investigation, identified a number of discourse variables that appeared to have an influence on the reading comprehension of elementary school children. This investigation was designed to assess the effect of two of these variables on the reading comprehension of second and third grade children.

One discourse variable tested in this study was identified as the pronoun referent variable. This variable referred to the use of a pronoun as a substitute for a noun, series of words, or an event. The other variable tested was labeled the dialogue variable and referred to the manner in which dialogue appears in discourse.

To test the influence on reading comprehension of the pronoun referent variable, a set of two selections was developed at the second grade reading level. Another set of two selections was developed at the third grade reading level. One selection in each set was designed such that the antecedent of all pronouns used in the selection was in the same or immediately preceding sentence. This was labeled the close pronoun referent condition and was predicted to facilitate reading comprehension. The other selection in the set was designed such that the antecedent of all pronouns used in the selection was not in the same or immediately preceding sentence. The two selections in each set were equated for readability and designed into a cloze test format for administration.

The same basic design was used to test the dialogue variable as was used with the pronoun referent variable. However, for the dialogue variable, one selection in each set contained uninterrupted dialogue. Under this condition, predicted to facilitate reading comprehension, the identification of the speaker occurred prior to the dialogue. The other selection in each set contained interrupted dialogue. Under this condition the dialogue was interrupted by the identification of the speaker.

Data were obtained from 192 second and third grade subjects responding to the cloze tests designed for the study. These data were analyzed using analysis of variance statistics. Based on the data analysis, the following findings were observed: 1) Even though higher reading comprehension scores were obtained for passages that contained the antecedents of pronouns no further distant than one preceding sentence, the findings were not statistically significant, and 2) Although a trend was found to exist that suggested uninterrupted dialogue facilitated reading comprehension, this finding was not statistically significant.

The analysis of the data suggests the tenability of the following conclusions: 1) The pronoun referent variable and the dialogue variable do not significantly affect reading comprehension although observable trend differences were present, and 2) Combinations of discourse variables have a greater degree of influence on reading comprehension than any one variable in isolation.

It is recommended that further attempts be made to identify and test the influence on reading comprehension of semantic and stylistic variables, particularly on low reading ability children in the beginning stages of learning to read.

Order No. 77-15,834, 130 pages.

STATE ANXIETY, REINFORCEMENT AND COPING PATTERNS AS INFLUENCES UPON LEARNING RATE IN FIRST GRADE CHILDREN EXPOSED TO SEVERAL STRESSORS WHILE LEARNING WORDS

SCHWARTZ, Barbara Marion, Ph.D.
The University of Wisconsin–Madison, 1976

Supervisor: Associate Professor Roger A. Severson

This study explored learning effectiveness under several different conditions of intrinsic task stress and extrinsic reinforcement. 100 First-grade children were seen in three different sessions and each time taught words under three different conditions. The first session varied reinforcement, giving feedback only in task one, social praise for correct responses in task two and social praise plus tangible reinforcement (candy) in task three. Session II employed a first task with feedback only, a second task involving words much harder to discriminate (to vary intrinsic stress) and a third task similar to task one but including social praise. Session III involved a first task with social praise, a second task, again administering social praise but involving twice as many words ("overload"), and a third task similar to the first but without social praise. A fourth session involved only 40 children in a free choice word learning task with hard, medium, and easy choices given twice with feedback only, twice with social praise, and twice with social praise and tangibles. Self-reported anxiety (an abbreviated STAIC) was obtained on three occasions and the observed behavior was rated for level of anxiety during all learning tasks.

Whereas two earlier studies had found no difference in average learning when social praise and tangibles were given for word learning in first graders, this study found social praise significantly enhanced learning, and tangibles significantly impaired learning. Although the tokens distracted from immediate learning effectiveness, they increased involvement and reduced observed anxiety. The two sessions employing a middle stressor task effectively detected children who handled stress adequately (maintained or improved learning under stress), as well as children who deteriorated under the stressful task and subsequently showed poor learning on the third task. Social praise was not sufficient to eliminate the total stressor effects during Session III, but analysis of subgroups indicated that social praise did reduce rated anxiety.

Self-report state anxiety, although moderately correlated over three assessments, did not relate to learning scores significantly and did not correlate with rated anxiety. Rated anxiety, although subjective, seemed a more valid measure in children of this age, correlating negatively with learning on every task.

The study explored the relationship of the tendency to respond positively or negatively to social praise with several other variables. Improving under social praise conditions was not related to the reaction to the stress tasks, nor to choosing more difficult tasks when social praise was added in a free choice situation. It is possible, however, that due to the novelty of this task exploratory behaviors governed the choice selection and differing reinforcers were unable to overcome this effect.

The relationship of anxiety with the application of either feedback or social praise was investigated. Contrary to prediction, high anxious learners did not perform significantly better on tasks using social praise as compared to tasks providing feedback only. The administration or removal of social praise in the learning task following the "stressor" task did not significantly affect performance in either high or low anxious children. These findings were confirmed when both self-report and rated state anxiety measures were used.

In general this study found that differing patterns of response were produced as a result of varying intrinsic task stress and extrinsic reinforcement. Although some children maintained or improved their initial learning effectiveness during stressor and subsequent learning tasks, others did not cope adequately. The administration of social praise was unable to offset the effects of the stressor task. Rated anxiety correlated negatively with learning effectiveness in every task. It remains for future studies to explore the stability and relationship of these patterns to subsequent learning and achievement.

Order No. 77-8812, 108 pages.

THE EFFECTS OF LEXICALLY AMBIGUOUS NOUNS EMBEDDED IN A READING TASK FOR CHILDREN

STUDAY, Diane Surle, Ph.D.
Case Western Reserve University, 1976

One way to look more closely at how semantic screens (Goodman, 1973) or the accumulation of meaning from prior context, operate in the reading process is through the study of lexical ambiguities. Words such as bat, as in baseball, and bat, the animal, require different contexts and lead the reader to different predictions about context which will follow the ambiguous word. Therefore, this study proposed to explore whether the presence of two meanings of a lexically ambiguous noun in contiguous sentences would reduce the size of the unit, the eye-voice span, children at the fourth and sixth grade levels are processing. (The eye-voice span is defined as the number of words the eye is ahead of the voice in oral reading, and was measured in this research by turning off a slide viewer, thus removing the printed display, and asking the subject to continue reading as far as he can after the light goes off.)

Since their lexicon is less fully developed, it was anticipated that fourth grade children would be less affected by the presence of ambiguity than sixth grade children. Also, it was hypothesized that the use of both meanings of the ambiguous nouns would trigger a reprocessing operation in working memory which would be evidenced by miscues in the two sentences that include the ambiguous noun. Therefore three dependent variables were assessed: 1. An eye-voice span measure of the exact number of words correctly reported after each light-out position; 2. A corrected eye-voice span measure which included miscues which were completely semantically accept-

able and did not change meaning; 3. A count of the miscues associated with each light-out position.

Eighty subjects from a middle-class suburban school system were chosen randomly from a sample of children with average standardized reading and IQ scores. There were forty children at each grade level with equal numbers of boys and girls. Subjects were tested on thirty three-line paragrapns presented one at a time on a 35 mm slide viewer. Half the subjects at each grade level were tested on an experimental condition in which the two meanings of the ambiguous noun was read in adjacent sentences. The other half were tested on a control condition in which the same stimulus materials were used, but the ambiguous noun in one of the sentences was replaced by a neutral noun. Materials were constructed at a third grade reading level, and were presented in random order.

Analysis of variance results and post hoc two tailed t tests revealed that the eye-voice spans were reduced in the experimental condition for fourth grade subjects in both the eye-voice span measure and the corrected eye-voice span measure. Also, girls across grade levels produced significantly more miscues in the experimental than in the control condition. The major implication of these results is that semantic information is an integral part of the reading process and that even relatively young readers, ten year-olds, are sensitive to the disruptive effects of lexical ambiguity. It appears that the semantic lexicon of ten year-olds is fully sensitive to the semantic constraints of a third grade reading vocabulary and is more fully developed than was hypothesized. Furthermore, this study provides empirical evidence that the semantic screens hypothesized in Goodman's (1973) model of reading do in fact operate in the reading process, and that girls, by age ten, may be somewhat more sensitive than boys to semantic constraints in the reading process.

This study is one of the few attempts to use a semantic variable, lexical ambiguity, to research the reading process in children. It is a technique that can be applied with relatively young readers who are sensitive to the disrupting effects of lexical ambiguity. This study could be extended by evaluating above average and learning disabled readers to determine the ways in which they differ from average readers in their use of semantic information. In addition, other semantic features could be embedded in a reading task to gain a fuller understanding of the ways in which semantic screens operate in a model of reading. Order No. 77-11,999, 98 pages.